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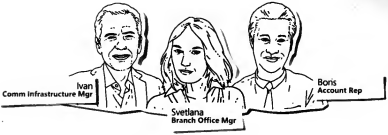
Microsoft



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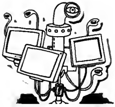
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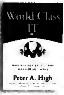

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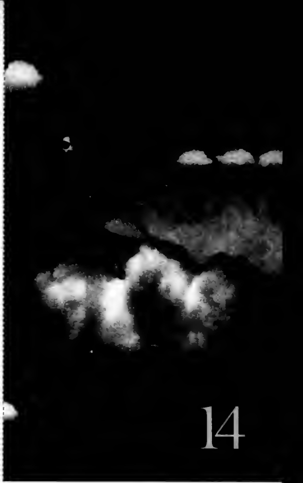

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■ ONLINE CHATTER

RESPONSES TO:

The Unspoken Truth About Why Your IT Sucks

Dec. 1, 2009

One reason IT sucks is it has no heart. What could be IT's heart (or passion) is replaced with a methodical machine driven by cost and a rigid technological structure which is usually based upon and limited to Microsoft technology.

The most successful solutions are ones that, first, put the user at the forefront and, second, are developed by passionate people — people who want to make the best solution, make the most people happy, write efficient code, and save the company money to boot. Management, however, needs to give these people as much freedom and as little rigidness as possible.

I see nothing but stressful and typically unhappy employees in IT. And then, as the author states, people with passion — who produce excellent solutions that save the company money and make users happy — are let go or are not recognized. Sometimes this is due to unconventional methods of attaining the solution (not fitting the Microsoft mold) or just a simple lack of appreciation from management.
■ Submitted by: *Smiroldo*

The deadliest words I know of in IT are "All you have to do is . . . ."

Let's face it: IT is a pretty spineless group. They generally know you can't reinvent Amazon over a holiday weekend for under $50. But when users come and say "All you have to do is . . ." and refuse to accept a more realistic estimate, IT almost invariably caves, promises the impossible, fails, and thereby demonstrates — yet again — that they're an overpaid bunch of hopeless incompetents.

Professions like management and marketing don't have major issues like this. To survive in people-facing occupations, you have to have a basic minimum of pushy and obnoxious qualities. IT would generally rather be technology-facing, and have to settle for just obnoxious.
■ Submitted by: *timh*

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A Pandemic Dress Rehearsal

**QL2 Software encountered a few problems when it did a test-run to see if its employees could work from home during a swine flu outbreak.
computerworld.com/s/article/9141635**

The Year Ahead in Mobile

**OPINION: We'll see more mobile services and fewer platforms, but Microsoft's will be among the ones that stick around.
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E-mail Overload (Or Status Emailicus)

OPINION: When e-mail gets in the way of getting things done, it's time to reconsider how we handle it. computerworld.com/s/article/9142370

Don't Expect Common Sense at the TSA

**OPINION: And punishing individual employees for security breaches is the wrong response.
computerworld.com/s/article/9142325**

The Long Road To 802.11n

Here's the back story of one of the longest technology-standard wars. computerworld.com/s/article/9141692

Will Windows 7 Change Desktop Virtualization?

Some will bite, but widespread desktop virtualization is years away. computerworld.com/s/article/9142107

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ENTERPRISE ARCHITECTURE

The No. 1 Cause of IT Failure: Complexity

IS THE problem a bad set of user requirements? Poor business alignment? No. According to software architect Roger Sessions, the primary cause of software project failures is complexity.

Complexity can create delays, cost overruns and systems that don't meet business needs, according to Sessions, who is chief technology officer at ObjectWatch Inc. and author of *Simple Architectures for Complex Enterprises* (Microsoft Press, 2008). "Our goal should be to design the least complex architecture possible that solves the business problem," he said in a report he released last month.

In the report, Sessions estimated that worldwide, the annual cost of IT failure is about $6 trillion — that's $500 billion per month. For the U.S., the annual cost is about $1 trillion. In an interview with *Computerworld New Zealand*, Sessions said his estimates may be 30% too high or 30% too low, but he maintained that it's the magnitude of the numbers that's important.

According to the report, "The IT Complexity Crisis: Danger and Opportunity," preventing so much costly IT failure would painlessly add $500 billion per month to the world economy, and it could make companies more profitable and enable governments to provide more services without raising taxes.

Sessions' remedy is a software design process called Simple Iterative Partitions, which "partitions business functions into subsystems" in a way that makes the overall system as simple and reliable as possible to achieve the business goal.

– Mitch Betts

GREEN IT

Helsinki Taps Data Center To Heat Houses

Helsinki public utility Helsingin Energia next month will open a new data center that will recycle heat from the servers to help generate energy and deliver hot water for the Finnish capital city.

The recycled heat from the data center, built by Helsinki IT services company Academica Oy, could add about 1% to the total amount of energy generated by Helsingin Energia, according to Juha Sipilä, the utility's project manager.

The data center is connected to Helsingin Energia's district heating system, which pumps hot water through a network of pipes to commercial buildings and residences in Helsinki, as well as to the utility's district cooling system, which brings in cold seawater.

In the innovative system, cold water is pumped through pipes in the data center to cool off the computer equipment. The water, now warmer, flows to a pump that further heats the liquid and sends it into the district heating system.

The system will generate enough energy to heat the equivalent of 500 large houses, while the data center will benefit from much lower cooling costs, officials said.

The data center is located in a former World War II bomb shelter carved into the bedrock under Helsinki's Uspenski Cathedral.

– MIKAEL RICKNÄS, IDG NEWS SERVICE

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BETWEEN THE LINES

By John Klossner

FUTURE WATCH

Nanotech Creates Batteries Out of Paper

RESEARCHERS AT Stanford University have used nanotechnology to create lightweight, bendable batteries out of paper.

The paper batteries are designed to be folded, crumpled or even soaked in an acidic solution and still work, according to Yi Cui, assistant professor of materials science and engineering at Stanford. The team created the batteries by coating a sheet of paper with ink made of carbon nanotubes and silver nanowires.

Stanford offered no indication of when the batteries might be ready for commercial use.

The striking aspect of the development is "how a simple thing in daily life — paper — can be used as a substrate to make functional conductive electrodes by a simple process," said Peidong Yang, professor of chemistry at the University of California, Berkeley, in a statement.

The nanotubes used in the paper batteries and supercapacitors have a very small diameter, which enables the ink made from them to stick tightly to the paper. The university noted that the paper supercapacitors may be able to handle 40,000 charge-discharge cycles, which is an order of magnitude more than lithium batteries can withstand.

Cui pointed out that the nanomaterials make better conductors than traditional materials because they can move electricity more efficiently.

This is just the latest report of scientists using nanotechnology to further battery research.

In April, MIT researchers reported that they are combining nanotechnology with genetically engineered viruses to build batteries that could power hybrid cars and cell phones.

And before that, another Stanford research team used silicon nanowires to enable lithium-ion batteries to hold 10 times the charge they could before, according to Cui.

– Sharon Gaudin

Micro Burst

Despite forecasts of an IP address shortage, only

7%

of 229 companies surveyed said that they have implemented the fix: IP Version 6.

RESEARCH RECAP

Personal PCs Find a Home In the Office

Companies are starting to let employees use privately owned notebook computers for work purposes, according to a Gartner Inc. survey of 500 IT managers in the U.S., U.K. and Germany.

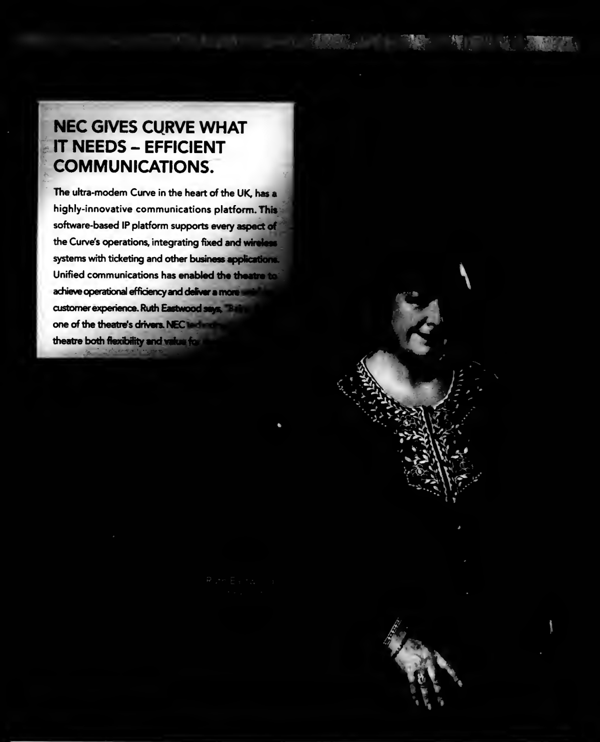
On average, 10% of the notebooks at the respondents' organizations were employee-owned, the Gartner report said, and the IT managers said they expect that percentage to creep higher next year.

Some employees like the trend because it means they can have more-powerful notebooks and newer designs than their companies' IT departments provide, Gartner said. For employers, it can mean lower costs.

The survey found that 47% of workplaces have banned employee-owned PCs, 43% have policies that allow the use of employee-owned PCs for work-related purposes, and 10% have no policy on the matter.

Gartner noted some variations from country to country: More than 60% of German companies allow the use of employee-owned PCs, compared with 30% of companies in the U.S. and the U.K.

– MITCH BETTS



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Ruth Eastwood

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Big Budget Cuts Don't Mean the End of Staff Training

AT THE height of the recession, Providence Health & Services in Seattle whacked its IT training budget by a hefty 65%. That meant conferences and most tuition-based classroom training were out of the question. So Eric Cowperthwaite, the health service provider's chief information security officer, started looking for alternate ways to provide his staff with ongoing education.

He approached officials at a local security company and offered to pay them a small amount to jointly develop training modules he could then deliver to his staff himself. What he got was a customized course on risk management methodologies and risk analysis skills.

The payback: "I was able to demonstrate to employees that I was still committed to their growth and development," Cowperthwaite said. "While I may not be able to let them go to a conference in Orlando, I'm still able to invest in my people. That was what was most critical: to show people that we were still willing to invest in them."

Cowperthwaite said he also visits with local FBI and Secret Service agents working in Seattle, Los Angeles, Portland and San Francisco — cities where Providence Health has offices.

"Someday, something bad is going to happen to your company. A laptop may get stolen or data gets stolen or a virus gets inserted into your network. Before you ever get to that point, go find the local FBI or Secret Service office, or even your local chief of police, and invite them to lunch and get to know them," Cowperthwaite advised.

The payoff is that if and when you're faced with a security crisis, you'll have allies you can turn to. You'll also get tips on how to help law enforcement authorities solve your case, Cowperthwaite said.

He cited a time when he worked with the Secret Service on some problems with malicious software. "What they wanted from us were forensically clean versions of the computers involved," Cowperthwaite said, and knowing that upfront meant the incident could be resolved quickly.

– Julia King

INNOVATION

The 3-D, squeezable mouse: Researchers have developed a squeezable input device, called Suma, that gives users a new way of interacting with computers, according to Duncan Smith, head of consumer product development at Cambridge Consultants Ltd. As Suma's pliant foam is squeezed, sensors translate the 3-D indentations into software-readable instructions to help control objects on the screen. Suma can not only move objects but also manipulate their shape, Smith said, adding that Suma could be used for gaming, 3-D graphics and medical applications.

SOURCES: IDG NEWS SERVICE; CAMBRIDGE CONSULTANTS LTD., CAMBRIDGE, ENGLAND

BOOK REVIEW

IT Leadership Boiled Down To 5 Elements

There isn't any flashy writing or trendy technology here. No mention of clouds, Facebook or Twitter. But the new book *World Class IT* (Jossey-Bass, 2009), by consultant Peter A. High, provides solid – dare I say timeless – advice for CIOs trying to manage IT for business success.

The book takes the CIO's complex world and boils it down to the following core principles (stated here verbatim):

1. Recruit, train and retain world-class IT people.

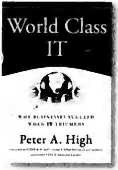
2. Build and maintain a robust IT infrastructure.

3. Manage projects and portfolios effectively.

4. Ensure partnerships within the IT department and with the business.

5. Develop a collaborative relationship with external partners.

Each principle gets its own chapter, and each one includes subprinciples, such as "maximize systems' uptime" and "align IT with the business's strategy." But what's interesting is that High says new CIOs should tackle those issues in the order presented above, starting with people and then moving on to developing a reliable IT infrastructure.



While these days it would be tempting to start with No. 4, the IT-business alignment principle, High says you need to get your IT house in order if you want to gain the credibility you'll need to work with other C-level execs. Besides, it's possible to have great business alignment but faulty IT plumbing.

That's what happened to Harrah's Entertainment Inc., which got glowing press for its IT-business alignment but hadn't paid enough attention to disaster recovery issues, according to the book's forward by former Harrah's CIO John Boushy. High's methodology pointed out the deficiency, Boushy says.

Along the way, High provides an amazing number of metrics that CIOs can use to measure their progress along the five frontiers he outlines. The metrics might be the most valuable part of the book, especially for IT departments struggling to figure out how to measure their performance.

Be forewarned: High says the journey from ordinary to world-class IT can take several years, and even then you can't rest on your laurels.

– MITCH BETTS

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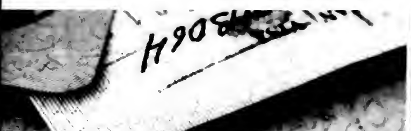

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U.S. Moves to Strengthen H-1B Enforcement

Immigration officials plan to conduct 25,000 on-site inspections in fiscal 2010.

By Patrick Thibodeau

U.S. IMMIGRATION officials are taking H-1B enforcement from the desk to the field with a plan to conduct 25,000 on-site inspections of companies hiring foreign workers during the government's current fiscal year.

That would mark a nearly fivefold increase in inspections over the previous year, when U.S. Citizenship and Immigration Services officials conducted 5,191 site visits. The federal fiscal year begins Oct. 1.

USCIS Director Alejandro Mayorkas disclosed the upgraded enforcement plan in a letter to Sen. Charles Grassley (R-Iowa), a co-sponsor with Sen. Dick Durbin (D-Ill.) of federal legislation aimed at increasing H-1B program enforcement.

In the letter, released by Grassley last month, Mayorkas said the agency began a site visit and verification program in July to check on the validity of H-1B applications.

Mayorkas, a former federal prosecutor who was recently appointed to the immigration post by President Barack Obama, told Grassley that the inspections aim to determine "whether the location of employment actually exists and if a beneficiary is employed at the location specified, performing the duties as described, and paid the salary as identified in the petition."

The immigration agency moved to boost enforcement of H-1B laws after an internal study released about a year ago disclosed widespread violations of H-1B rules by employers. The study found that one in five visas involved either fraud or "technical violations."

The increased enforcement comes after filings for H-1B visas started to grow in October, following a lull of several months.

Immigration attorneys said the renewed H-1B demand may be a sign that the economy is improving as companies seek to hire foreign IT professionals, including developers of electronic games and other products.

From last summer into September, applications for H-1B visas had flatlined at about 45,000 petitions. But demand rebounded in October, and the USCIS reported that fiscal 2010 visa petitions had reached 61,100 by Dec. 4.

The annual cap for H-1B visas is 65,000.

Immigration attorneys project that the H-1B cap for the current fiscal year should be reached by early 2010, far later than in recent years, when the pool of available visas was consistently exhausted within days of the April 1 start of the filing period.

Randall Sidlosca, an immigration attorney in the Miami office of law firm Fowler White Burnett PA, noted that some of his clients plan to ramp up operations in 2010, and he believes an improving economy is behind the increase in H-1B petitions.

However, data released last week by the USCIS showed that during fiscal 2009, some U.S. companies, including Microsoft Corp., Intel Corp. and IBM, continued to hire people under H-1B visas despite cutbacks in their own staffs and an overall decline in IT employment.

The year-end USCIS data also showed that some major Indian IT services firms cut back on their H-1B use as the economy softened.

For instance, Infosys Technologies Ltd. received only 440 visas — less than 10% of the 4,559 it received in fiscal 2008. Meanwhile, Wipro Ltd. topped the fiscal 2009 list with 1,964 visas; that's about three-fourths the number it got the year before. ■

'War of Innovation' Will Change Face of Search

Analysts say the Google-Microsoft war has already yielded a slew of search upgrades. **By Sharon Gaudin**

THIS month's flurry of upgrades to Google Inc.'s eponymous search engine, coupled with Microsoft Corp.'s renewed charge into the search business, could soon lead to radical changes in one of the Internet's most popular applications.

Analysts say the increasingly heated battle between Microsoft's new Bing search tool and Google is already bringing users an avalanche of innovations that should continue for a year or two.

"Google and Microsoft sparring is fueling this," said Hadley Reynolds, an analyst at IDC. "Microsoft's willingness to invest in search and not just let Google walk away with it is driving a new level of competition."

Rob Enderle, principal analyst at Enderle Group, said Google is moving quickly to defend its turf. "We've got a major battle going on for search right now," he said. "Google has the keys to the castle, and everyone else is storming the gates. Whenever you have heavy competition, you'll see rapid changes."

Early this month, Google released several new search tools, including a much anticipated real-time feature that offers users the option of seeing relevant links that have just been added to the search engine's index. The company had promised the feature in October, after Twitter Inc. agreed to let Google pull posts on the social networking site into search results in real time.

Microsoft signed a similar agreement with Twitter, and another with Facebook Inc., to add a real-time feature to Bing. The Bing update hasn't yet launched.

Google also unveiled three other offerings this month: Google Goggles, a photo-based search tool that's designed to let users send photos of, for example, a business card, book cover or bar code from an Android-based smartphone to Google for quick identification and data manipulation; a feature-rich dictionary that defines words using a variety of sources; and a translator designed to help users find Web pages written in more than 40 languages.

Not to be outdone, Microsoft this month released the beta version of its updated Bing Maps tool set that some industry watchers said may outshine the popular Google Maps.

"The competition between Microsoft and Google is driving a war of innovation and a constant upping the bar in terms of features and function," said Dan Olds, an analyst at Gabriel Consulting Group Inc. "I don't expect to see this change anytime soon."

The rapidly emerging new tools are starting to change the search paradigm from one where the same results are served to all users to one where search tools serve up more personalized results that include various types of content, including images, video, tweets and blog posts, said Olds.

Less than six months after the launch of Bing, Google continues to dominate the search business, according to Experian Hitwise, an online market tracker. The company said that 71.57% of all searches in November were conducted on Google, up about one percentage point from October.

Meanwhile, No. 3 Bing's market share slipped from 9.57% in October to 9.34% last month. Yahoo Inc.'s search engine maintained its runner-up position, but its share slipped almost one percentage point.

Yahoo and Microsoft this month finalized a deal that calls for Bing to be the primary search engine on Yahoo sites, but that agreement still requires regulatory approval. ■

JON SHEA

■ THE GRILL

John Golden

An IT executive learns **life lessons of perseverance and strength** as he overcomes injury to scale some of the world's highest mountains.

Dossier

Name: John Golden

Title: Founder

Organization: LiveActive Foundation

Location: Chicago

Most interesting thing people don't know about you: "I'm a seven-time cardboard boat building champion. You have to build it completely out of cardboard, put eight people in it, put it in a lake and race it."

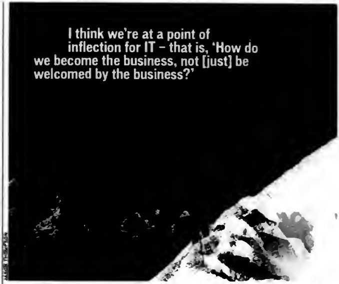
Favorite place: "Quite honestly, my home. If you asked me my favorite country outside the U.S., it's Australia. It's a beautiful country, with extremely nice people."

Biggest fear: "My biggest fear is heights. That's been one of the biggest challenges in climbing – managing my fear."

John Golden has climbed some of the world's most difficult peaks, including Mount Everest. Yet this IT executive's climbing achievements are only part of his story. Until just a few years ago, Golden suffered constant pain in his knees. He had undergone 23 operations without much relief, and he had trouble climbing stairs and even walking. But in 2005, Golden received a double cartilage transplant on his left knee that gave him the physical ability to literally scale new heights.

Golden, 43, former CIO and executive vice president at insurance giant CNA Financial Corp., says his experience taught him important lessons about life, business and even information technology. He's now working with the LiveActive Foundation, a nonprofit he created in March 2008 to raise awareness of and money for orthopedic research, and he's helping to launch a commercial venture associated with the foundation.

Your fund's Web site listed its first fundraiser as the "Golden Everest Expedition." What was it like climbing Mount Everest? It was a pretty epic experience. The journey is more than you can imagine, although we didn't make the summit. We got up to Camp 4, which is just over 26,000 feet up. But weather forced us down. Coming down we got hit by a



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JASON THOMPSON

blizzard — a blizzard like you wouldn't believe, with extreme temperatures, 20, 30 below. I have a transplanted left knee, and it dislocated, so it was difficult to walk on. We did a transverse on some ice, and the ice broke out from under my feet, and I fell. I was roped to the mountain, and it was almost vertical, so I swung into the mountain with the left side of my body. I cracked three ribs and I broke my hand. My whole climb was filmed by [Tigress Productions for] the Discovery Channel, so there will be a show on me.

Are you going to climb Everest again to make the summit? It's not a burning desire in me to do it. But if [my life] allows it, I might try it. It's such a big sacrifice for my family — you're gone 70 days. The Discovery Channel keeps hoping I'll come back.

Your climbs take you to some pretty remote locales. Do you take along a BlackBerry or laptop? The No. 1 question I get asked by business leaders, IT leaders, is "How do you get all that time off from work?" CNA was very understanding. I'm grateful they gave me that time. With that said, I pretty much worked every day I was there. Even though I was in some of the most remote parts of the world, I was connected.

I did a shorter trip to Nepal [before Everest], and one of the things I learned was cellular technology doesn't work out there. What I bring is satellite. I had both a PC — an HP Elite book — and I had an Apple MacBook Air. I had a portable satellite dish; it weighs just a pound and a half. And I had 40 watts of solar panels, because you have no electricity. The hardest thing is making sure you keep everything charged. I was able to blog every day. We sent photos. I was able to do conference calls at work. I have two young kids — a daughter who is 8, and a son who is 6 — and I would call back and Skype with them twice a week.

How did you get into mountain climbing? It all started with a college injury. My legs were deteriorating quickly every day, and when regular medicine ran out, we did this experimental surgery in 2005. It was almost a two-year rehab process, and going through the rehab, I went to the doctor and said I have to have a goal at the end of rehab. My first goal was being able to play with my kids, my second was to lose weight — I went from 250 to 180 pounds. So then I needed another goal. My doctor said no running, jumping or ballistic moves. So I said, "How about climbing mountains?" and he said, "Yeah, sure." He thought I meant a bluff in Wisconsin. This would have been June of 2007, so I went to [premier high-altitude mountaineer] Ed Viesturs. I had him come speak with us at CNA, and I told him I wanted to climb mountains. So he hooked me up with some guys to climb Mount Rainier, which I climbed in late September 2007. It was just an unbelievable experience. I was grateful to everyone who helped me, so I wanted to find a way to give back. That's when I created the LiveActive Foundation. Then I came up with my plan for climbing Mount Everest.

What did this teach you about yourself, your career and leading IT teams? It reminded me to be vulnerable. People don't like to be vulnerable because they think about it as a sign of weakness. Many times as executives we're afraid to say we don't know or understand, and we don't open up ourselves to as many ideas as we should.

And the other thing it [taught me is] that you don't build a team of people who are like you — you build a team of people who can complement you, who fill in for your weaknesses. And one of the things it reinforced was to keep going. So many times you make a decision, you run with it, you get into a rut, and then you wait, wait, wait, and then something happens and you go again. But it reminded me that I have to take control, that I have to keep going.

What do you see as the biggest challenges facing IT right now? I think we're at a point of inflection for IT — that is, "How do we become the business, not [just] be welcomed by the business?" Nothing drives me more crazy than when I hear IT people say, "We talk to the business." You don't hear marketing folks or accounting say that. The inflection point is, how do we become the business? We need to own that attitude as IT leaders.

How do you handle setbacks? I have had plenty of them. I don't judge myself as "Oh, I let people down." I look at it as a bend in the road, not the end of the road. I think, "OK, I went down this path, I didn't get as far as I wanted, but let's move on, let's learn from it."

— *Interview by* **Mary K. Pratt,** *a* Computerworld *contributing writer*

EARLY ADOPTERS
ARE EMBRACING
CLOUD COMPUTING –
**ON THEIR
HOME TURF.**

PIONEERS OF THE PRIVATE CLOUD

BY MARK EVERETT HALL

COVER STORY

PRIVATE CLOUDS — where companies use their own infrastructure and provision virtualized services to end users via automated tools — are gaining ground among IT leaders who want to deliver advanced services at lower costs.

However, as with any new approach to computing, private clouds today fall short on manageability, and some users worry about the risk of vendor lock-in, particularly with virtualization and other tools that make cloud computing possible. Further, the fuzzy nature of just what private cloud computing means could slow the adoption of internal cloud setups.

That lack of definition doesn't bother Geir Ramleth, CIO at San Francisco-based Bechtel Corp., one of the world's largest engineering and construction firms. In fact, he says, the lack of a precise definition is a good thing, because looking at the private cloud too narrowly would "limit what it can do for us. You're talking philosophy here."

Alan Boehme, senior vice president and head of IT strategy at ING Financial Services in San Francisco, adds that a private cloud requires new ways of thinking about systems architecture. "It's not just servers, storage or networks; it's every component," he says.

Meanwhile, Bob Zukis, an IT strategy and operations consultant at PricewaterhouseCoopers LLP (PwC), says, "The private cloud is less about technology than it is a rallying cry for IT."

Continued on page 18

MICHAEL MORGENSTERN ILLUSTRATION

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Continued from page 14

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GOING PRIVATE

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At Bechtel, 44,000 employees across the globe have access to 230 applications. The IT department has already shifted about 60% of those applications into the company's private cloud. The rest will be moved to the cloud by the beginning of 2010, says Ramleth.

Such a "transformation," as Ramleth calls it, takes years. CIOs need to move carefully, he says, "because you don't want to move the sins of the past into new data centers."

Before 2005, Bechtel had an IT-centric attitude about delivering services to users, Ramleth says. It had no set standards and provisioned resources manually. Now the company embraces a collaborative model of computing, one built on strict standards and guidelines that permit policy-driven access to provisioned resources.

For example, Bechtel standardized on Hewlett-Packard dual- and quad-core BladeSystem servers. And because the services are separated from servers and other infrastructure elements that could change as hardware evolves, existing or future applications and services could easily run on new servers, storage systems and networks.

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Ultimately, evolving to a hybrid public-private cloud scenario will even allow him to eliminate capacity planning from his IT responsibilities, he says. CIOs should build private clouds for normal workloads and then buy into the public cloud for peaks, he argues.

ING's Boehme agrees. He predicts that a policy-based, hybrid cloud approach is IT's future. "It doesn't matter where the assets and applications are running," he contends.

On the face of it, a private cloud appears much like other in-house data centers, where applications run on machines that get plugged into outlets. As Cheryl Doninger, research and development director of enterprise computing infrastructure at SAS Institute Inc. in Cary, N.C., says, "We license the software, and we own the hardware."

But that's where the similarity to old-line computing ends, she adds. At SAS, users access a self-service portal to reserve resources on the company's private cloud, much like customers of Amazon.com's EC2 do with that public cloud service. For automatic provisioning, SAS uses a tool called the Infrastructure Sharing Facility from Platform Computing Corp. in Markham, Ontario.

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While some IT managers are comfortable with automating the entire resource reservation and provisioning process, others are more cautious. Sinochem Group, No. 170 on *Fortune's* Global 500 list, is one example. Through a translator, Jinsong Peng, IT general manager at the Beijing-based industrial conglomerate, described how the company carried out a full SAP upgrade for its 200 subsidiaries by using a private cloud during the testing and deployment cycles.

"In the traditional model, we would have needed to replicate multiple systems throughout the development and testing processes," Peng says. However, because his team could share private cloud resources, Sinochem needed to add only 10% more capacity to the company's IBM AIX server infrastructure. As is the case at SAS, testers at Sinochem requested systems in various configurations, which IBM's CloudBurst service management tools dynamically allocated. But Sinochem instituted policies that also routed each resource request through a systems administrator for approval, Peng says.

Even with that conservative, human-in-the-middle approach, the automated provisioning process helped Sinochem complete its full SAP upgrade in seven months. That's remarkable, given that such projects can take years to complete. For example, Shane Co., a Colorado-based retail jewelry chain, cited in bankruptcy filings that its SAP upgrade took two and a half years.

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LIMITED TOOLS

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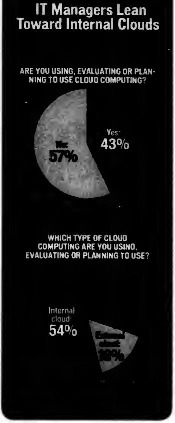
"You want a single pane of glass for management," which doesn't exist today for hybrid platforms, he says. For example, if IT pushed workloads into public cloud computing services today, in-house administrators would not be able to manage the workloads in those external data centers. Those workloads would run wherever the service provider's policies deemed it appropriate. Cross-cloud policy management doesn't exist.

Paul Burns, an analyst at Neovise LLC, a Fort Collins, Colo.-based research firm specializing in cloud computing, echoes Boehme's view. Private clouds will dominate inside corporate IT for the foreseeable future because of classic business concerns about governance, security and, mostly, control, he says.



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Beyond concerns about manageability, Boehme raises the specter of a move to cloud computing leading to vendor lock-in. For the most part, CIOs abhor vendor lock-in. Reliance on a single vendor can be costly and can keep a company from making necessary infrastructure changes. But Boehme worries that IT is risking "hypervisor lock-in" because of the lack of deep interoperability between the various virtual machine managers on the market.

For example, if one hypervisor leapfrogged others in terms of performance, security or features, a company that used a different hypervisor might not be able to switch and take advantage of the new functionality because the cost of switching might prove prohibitive. Also, in the event of a merger or acquisition, integrating the two companies' operations could prove difficult if each used a hypervisor that was incompatible with the other's.

But many enterprise IT managers are finding that the benefits of cloud computing far outweigh the limitations. The biggest factor, of course, is money, at a time when the recession has halted growth in IT budgets.

Still, IT has to continue delivering services to the business, though it has to do so while spending much less money. A private cloud lets IT get immediate dividends through self-service, automated provisioning and improved system utilization — all of which can lower IT operations costs, which chew up as much as 70% of a CIO's budget, according to PwC.

As Vinod Baya, director of the center for technology and innovation at PwC, observes, "IT has done great automating everyone but itself." Now, he says, is the right time to start. ■

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IT Managers Lean Toward Internal Clouds

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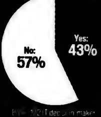

Base: [illegible] IT decision-makers in charge of servers

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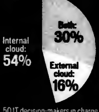

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– *MITCH BETTS*

■ OPINION

Preston Gralla

Has Microsoft Become Toothless or Friendlier?

AT ONE TIME, Microsoft was about as welcome in Silicon Valley as Darth Vader at a Jedi knight convention. Commonly referred to as the Evil Empire, the company was feared and hated in roughly equal measure when it opened its first Silicon Valley office in October 1999.

In that same year, for example, when U.S. District Judge Thomas Penfield Jackson ruled that Microsoft had used its monopoly power to the detriment of consumers and innovation in general, Gary Rivlin, author of *The Plot to Get Bill Gates*, told the *San Francisco Chronicle*, "I'm sure there are champagne corks being popped all over the Valley."

He was no doubt right at the time. But recently, Sam Altman, co-founder of Mountain View-based Loopt, which makes a cell phone-based GPS sharing system, told the *Chronicle* that years ago, "I would have told you, 'Microsoft is really evil.' I would never work with them." Today, though, "they're an incredible partner," he says.

Altman isn't alone. Yahoo was once seen as the anti-Microsoft — a laid-back, innovative, homegrown Silicon Valley firm diametrically opposed to what it saw as the shark-like business practices and buttoned-down culture of Microsoft. But earlier this month, Yahoo and Microsoft finalized a search and advertising deal that calls for Microsoft's Bing to power Yahoo search sites, and for Yahoo to handle premium search advertising services for Microsoft.

And how about open-source technology? There was a time when Microsoft used all of its considerable might to try to squash open source, and open-source proponents would have preferred to be stripped naked, covered with honey and forced to lie on top of a colony of fire ants than deal with Microsoft. But then, several years ago, Microsoft partnered with Novell to work on Linux initiatives. And recently, Microsoft even released as open source a download tool it developed — because it had accidentally used an open-source component in the tool.

■ So, what happened? Why are we seeing a kinder, gentler Microsoft?

So, what happened? Why are we seeing a kinder, gentler Microsoft that many Silicon Valley companies regard as a potential business partner?

Depending on your point of view, it's either because Microsoft finally recognized that it's in its best interest to be a cooperator rather than a predator, or it's because Microsoft is on a long, slow decline, and economic realities are forcing it to act in ways contrary to its founders' DNA.

Those who adhere to the Microsoft-as-cooperator theory trace the change to the antitrust suit. They say that losing that suit led to a period of soul-searching, with Microsoft recognizing that it could no longer thrive by going it alone. That ultimately prompted it to sponsor industry conferences, look for business partners rather than companies to consume, and expand its Silicon Valley presence to 1,300 workers, with another 700 elsewhere in the Bay Area.

Others say that Microsoft's sea change had nothing to do with soul-searching and everything to do with the company's growing irrelevance. The antitrust ruling took away many of the advantages the company had against its competitors, and so Microsoft simply could no longer use its monopoly power to crush competitors. In addition, it fell behind the times and allowed Google to go from start-up to monster in record time. Finally, operating systems are no longer particularly important, and the cloud is the future — and that means Google.

Which story tells the truth? Probably both. Any soul-searching that went on at Microsoft was likely caused not by a fit of conscience, but by a hard dose of economic reality. The truth is, Microsoft simply can't go it alone anymore, even if it wants to. But even though change may have been forced on it, the company truly has altered its outlook and its way of doing business. It has learned that in today's tech world, you've got to go along to get along. ■

Preston Gralla *is a contributing editor for* Computerworld.com *and the author of more than 35 books, including* How the Internet Works *(Que, 2006).*

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Buy one BlackBerry® at our lowest prices ever and get another FREE

Free BlackBerry Smartphone of equal or lesser value. New 2-yr activation on voice plan with email feature req'd per phone

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Railroad Crossing: When Mainframe Meets SOA

Union Pacific builds a more nimble network that cuts staff training time and gives customers more shipment visibility. **By Thomas Hoffman**

AT THE HEART of Union Pacific Corp.'s railroad operations is an IBM mainframe-based transportation control system that's been chugging along like a hardworking locomotive for nearly 40 years. According to industry experts, it was a pioneering system when first introduced, and it made the Omaha-based transportation giant one of the first companies in the world to make extensive use of online transaction processing technologies.

But while Union Pacific has been able to build on the system's 11 million lines of macro assembler code and make functional modifications to it over the years, the technology has grown obsolete, according to company executives. That has made it tougher for developers to add features in response to customers' business requirements in what has become an increasingly "alert-driven, workflow-based world," says Martin Malley, assistant vice president of information systems

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at Union Pacific Railroad.

For example, because of slowing sales in the automotive industry, Union Pacific executives wanted the ability to commingle vehicles from different manufacturers on a single railcar, says Malley. The old system wouldn't have been able to handle that change, he says. But thanks to a new distributed network that has been in development since 2006, the company has been able to introduce some of that functionality and much more.

The emerging network, dubbed NetControl, is based on a service-oriented architecture platform that relies heavily on open-source technologies such as the Apache Web server, Hibernate query software and SpringSource's Java application management tools. It is being written in J2EE and runs on Linux. Components of the new transportation control system are being deployed in stages to help Union Pacific better manage more than 90,000 railcars and 32,000 miles of track. The SOA project will cost $150 million to $200 million, and the system is expected to become fully operational by the end of 2013, at which time the company plans to phase out the IBM mainframe.

A SYSTEM FOR THE FUTURE

The project was conceived in part because Union Pacific was having difficulty recruiting IT workers with macro assembler skills to maintain and enhance the older system, says Senior Vice President and CIO Lynden Tennison. Many IT workers who are familiar with the mainframe-based system are nearing retirement age, and "most colleges and universities don't even teach assembler," he says.

Union Pacific also wanted to develop a system that would improve customers' interactions with the company and help drive internal productivity gains, says Tennison.

In recent years, many freight customers have downsized or outsourced their shipping departments, says Chip Kraft, director of operations planning at Transportation Economics & Management Systems Inc., a Frederick, Md.-based consulting firm. Those companies are now counting on railroads to provide more services that are easier to access.

At a Glance

Company: Union Pacific Corp.

Headquarters: Omaha

Business: Its principal operating company, Union Pacific Railroad, provides freight transportation services to 23 states in the western two-thirds of the U.S.

Company stats: Revenue of $18 billion in 2008; net income of $2.3 billion in 2008

Project champions: Initially, it was Lynden Tennison, senior vice president and CIO. The current project leader is Martin Malley, assistant vice president of information systems at Union Pacific Railroad.

Size of project team: 220 people, including offshore developers

Size of IT staff: Just over 1,400 people, including 400 in telecommunications operations

Project investment: Union Pacific plans to invest roughly $200 million in a new transportation distribution network that's being completed in stages through 2013.

Project payback: By automating customer billing processes, Union Pacific has dramatically reduced the amount of manual edits needed to process customer bills and is saving millions of dollars in labor costs.

> **"[Staffers and customers] expect to be able to go to the Web to find what they're looking for without having to use some special code to get there.**

LINDA BRANDL, VICE PRESIDENT, CUSTOMER SERVICE, UNION PACIFIC CORP.

Union Pacific is working to address those types of requirements in NetControl, which is in the third year of a multiyear design effort and about 30% complete. For instance, more than 99% of the railroad's customer orders are generated electronically over the Web and through EDI feeds, says Linda Brandl, vice president in charge of Union Pacific's 400-person national customer service center. When freight customers sent electronic orders through the mainframe system, information in the orders didn't always match up with data in Union Pacific's records — for example, there might have been differences between location codes, says Tennison. When that occurred, customer service representatives had to manually edit the orders.

Union Pacific automated many of those processes in the new platform by applying a rules-based system under an electronic shipment services application that was implemented in August 2004. The system helps catch any disparities and "fix them for good," says Brandl. That application has almost completely eliminated the need for customer service agents to make corrections on orders and bills of lading, says Malley, who is the NetControl project leader.

PRESSURE TO SAVE

Those improvements alone have saved the company several million dollars annually in labor costs, says Tennison. The system has helped Union Pacific reduce its electronic billing failure rate by 59% since it was installed.

It has also enabled Union Pacific's customer service department to work more efficiently, since it no longer has to delay customer orders while manual corrections are being made, says Brandl.

That kind of automation is critical for transportation companies like Union Pacific, because freight traffic sagged during the recession. In its July 23 quarterly financial report, Union Pacific stated that its year-over-year freight revenue had declined 28% during the quarter that ended June 30.

Such pressures are driving transportation companies to push IT-business projects aimed at generating "significant" ROI through efficiencies and cost controls, says Jack W. Plunkett, CEO of Plunkett Research Ltd. in Houston. Those types of projects include the deployment of Web-based systems to help transportation carriers communicate more effectively with customers "while cutting down on the need for human operators," Plunkett adds.

Union Pacific didn't conduct an ROI analysis on NetControl, because the project was viewed as a risk mitigation strategy to replace a 40-year-old system that has become difficult to maintain but is nonetheless core to the company's business, says Tennison. Still, he says company executives have identified cost savings generated by NetControl.

Project leader **MARTIN MALLEY** says NetControl makes it easier to serve customers.

Tennison says Union Pacific considered other options besides building a completely new system, including the possibility of using on-demand cloud-based services, but they didn't meet the company's needs. "Although we do see huge swings in capacity, we don't in volume changes. We didn't see the economics, and we don't have the wide swings in compute requirements" to justify a shift to on-demand computing services, he says.

The NetControl project also gives Union Pacific a chance to make its transportation services better for its customers. For instance, whereas the older system offered freight customers the ability to track and trace their orders, the new SOA-based platform will enable customers to see their actual itineraries. That will be made possible by more tightly integrated Internet capabilities and new applications that tie in more directly to customers' business processes, says Brandl. She notes that the 220-person NetControl project team recently began planning the development of that functionality.

Because the NetControl system is being phased in over time, Union Pacific's freight customers already have increased visibility into their orders. For example, customers no longer have to call or fax in their orders a few days ahead of time with the number of freight cars they'll need for a single shipment or set of shipments, says Brandl. In 2005, the NetControl project team developed an application called Total Car Management that made it possible for customers to place orders via the Web and use their browsers to see when freight cars have been applied to their orders, says Brandl. The application has helped Union Pacific reduce the amount of manual car orders by 75% since it was installed, according to company officials.

Union Pacific's shift away from the mainframe system's green-screen interface has also benefited many of the younger employees. For instance, Brandl says it takes 10 weeks to train a customer service rep on the old system, but it's expected to take just six weeks once the new system, which is much more intuitive, is full implemented.

Younger people "have grown up in a texting environment with MySpace and Facebook," says Brandl, so many of the company's younger staffers and customers "expect to be able to go to the Web to find what they're looking for without having to use some special code to get there" as they would with the green-screen system.

Still, the NetControl project team had to make sure that the new GUI wouldn't be a complete shock for those employees who had become accustomed to the look and feel of the old system. To strike a balance, developers have created a set of browser-based style sheets that allow end users to choose their GUI preferences, says Tennison.

It helps that the project team has introduced functionality in "baby steps," says Tennison. From a cultural perspective, he says, "that made it a lot easier, maybe because we didn't go too fast." Instead, the company has laid new track for NetControl while the mainframe is eased into the boneyard. ■

Hoffman *is a freelance writer in New York. Contact him at tom.hoffman24@gmail.com.*

Open-Source Payload

When CIO Lynden Tennison and other members of the Union Pacific IT team began exploring technical platforms for hosting the NetControl system, they identified a few must-haves: The system would have to be long-lasting, able to scale effectively and able to support a "five-nines" (99.999% uptime) environment.

"We designed an engineering model of a loosely coupled server environment, much like you'd find at a Google but not quite as sophisticated," says Tennison of the initial design efforts, which began in early 2003.

The team spent about two years running test evaluations and mock-up models. "Once we understood enough about the technical framework, we started in earnest on the redesign of the core business in mid- to late 2006," Tennison adds.

Project team members opted for a distributed network because they wanted a system that could efficiently handle compute-intensive applications, such as those that build optimization models for locomotives and railcars, says Tennison. "We wanted to be able to throw a lot of horsepower at these problems and not be constrained by a big, monolithic engine," he says. The team ultimately decided to run the system on Linux.

For Martin Malley and members of the 220-person NetControl project team, one of the biggest challenges has been determining which features of the old system have to be preserved – and do that without the aid of documentation on how various business processes in that system have evolved, says Malley.

NetControl needs "a lot of horsepower," says CIO LYNDEN TENNISON.

To do that, the team is applying an agile model where applications are designed three to six months ahead of the software development schedule, says Malley. Application delivery teams work in one-month shifts, and new releases are generated each quarter.

That approach tends to work well for service-oriented architecture initiatives, says Randy Heffner, an analyst at Forrester Research Inc. With an SOA-type framework, says Heffner, "there are opportunities to automate things and rethink how certain processes work."

– *THOMAS HOFFMAN*

■ SECURITY MANAGER'S JOURNAL | MATHIAS THURMAN

Not All Patches Are Created Equal

Not all patches are for operating systems, **and not all** deserve the **same priority.**

NORMALLY, WHEN we think of patch management, we think of Microsoft security updates and service packs or Solaris patch clusters. But what about those other patches? You know, the patches for IBM's WebLogic, Sun's Java and RIM's BlackBerry Desktop. Or the ones for Adobe, SAP, PeopleSoft, Oracle and other applications that aren't covered by standard operating system patches.

The other day, at my company's daily operational status meeting, the operations manager presented a list of outstanding security tickets. There were over 80 related to pending application patches. There are various reasons for this backlog. One is the lack of a development environment to test patches before deploying them to production. Another is that a patch might revert configurations to the default settings. In other cases, we have lost tribal knowledge about an application because the original administrator was laid off and left without sharing what he knew.

I had to do something, but mandating that all patches be installed immediately would probably result in disaster. I decided to spend some time analyzing each vulnerability and then prioritizing them based on whether there was some leeway in when a critical patch could reasonably be deployed.

In establishing criteria for that prioritization, I first considered what the impact would be if a vulnerability were exploited. Would a hacker be able to gain remote access or launch a denial-of-service attack?

Another consideration was the location of a vulnerable resource. A Web server sitting on the Internet has a higher probability of getting hacked than one on our internal network, and our Active Directory server would surely need more attention than the server running the HR survey tool. Then there was the question of exploitability. Would a script kiddie be able to exploit the vulnerability, or would the hack require advanced knowledge or programming skills?

■ Mandating that all patches be installed immediately would probably result in disaster.

ADDING WEIGHT

An important consideration is availability. Application vendors sometimes err on the side of caution and label a vulnerability as "critical" even though it is extremely unlikely that any code will ever be written to exploit it. The vulnerability can't be ignored, but questions can be asked: Is exploit code freely available on the Internet? Is it included within the Metasploit application? (Metasploit is a tool for developing and executing exploit code against target machines and other IT resources.) Or is the code only available through covert channels? The answers to those questions help determine how quickly you should move.

Finally, patching priorities can depend on whether compensating controls are in place. For example, an exploit that requires an end user to visit a malformed Web page could be a low priority if you have globally deployed a Web reputation service.

Trouble Ticket

AT ISSUE: Application patches haven't been applied in a timely manner.

ACTION PLAN: Establish criteria for setting priorities, and get the most crucial patches deployed ASAP.

To help in establishing priorities, I created a spreadsheet with weighted averages. For example, if exploit code is available only through covert channels but the vulnerable resource faces the public Internet, it would be given more weight than if the vulnerable resource were in the DMZ, protected by an application proxy.

Prioritization gave the operations team some additional time, but at the end of the day, all of the patches still need to be deployed. Next on my agenda is providing training to the Level 2 security analysts so they can apply the same methodology in prioritizing future application patches, and so I can attend to more pressing matters, such as endpoint data leak prevention, which I'll discuss in my next installment. ■

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To join in the discussions about security, go to **computerworld.com/blogs/security**

*This week's journal is written by a real security manager, **"Mathias Thurman,"** whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

OPINION

Steven J. Vaughan-Nichols

All Google, All the Time, Everywhere

WE ALL USE GOOGLE. Well, maybe not Bill Gates, but that's about it. Now, Google is hoping to become an even bigger part of our everyday lives.

The key to this is Google's three new search features: real-time search, location-based service and augmented reality.

Think about it: Google has primarily been about computer-based search. You sit at your PC and find what you want on the Web. But if you put those three new features together, where do they shine the best? On mobile devices. With Google's Android powering phones and Chrome OS on netbooks, I see the company making a preemptive strike to take over mobile computing.

Real-time search will clearly be useful for anyone who wants to know what's happening *right now*, but I couldn't help noticing that one example Google gave when it announced the new functionality was that beyond just helping you find out where you could get an HINI flu shot, it could also show you how long the lines were. In other words, it's a perfect mobile application.

Many of the real-time updates will be coming from social networking sites. Facebook, MySpace, FriendFeed, Jaiku, Twitter and Identi.ca are all on board. But wouldn't it be handy to know where your friends are when you're out on the town?

Of course, it helps to know where *you* are as well. That's where LBS (location-based service) comes in. Today, LBS tends to rely on a mobile device's GPS and compass. Higher-end devices have both, and others will have them soon. With this mapping information, your Google-enabled smartphone not only can tell you where your friend is, based on her real-time social network update; it can also say where you are in relation to her.

Where do Google's new search features shine the best? On mobile devices.

Let's take it a step further. Say you don't recognize where you are. No big deal; with your mobile device's camera, Google Goggles "looks" at your surroundings and tells you what's what. Oh, look, Google just displayed on your camera's viewer the name of the Chinese restaurant where your friend is as you passed the lens over it. Welcome to the world of AR (augmented reality).

Chances are you don't know a lot about LBS and AR. You're going to. Google has decided they're ready for prime time, and it's putting its considerable resources behind them.

Some apps from other companies already make use of the LBS/AR combination. These include the Layar Reality Browser and Mobilizy's Wikitude. Just like Google, both use a Web browser metaphor to present information to you. For example, with Layar, you can take a Beatles-oriented guided tour of London's Abbey Road using your mobile phone.

To this kind of functionality, Google can add its real-time social networking information. So if you were touring my hometown of Asheville, N.C., you could not only view information about the Biltmore house on Wikipedia, but you could also find out what your friends had to say about the place after their visit a week earlier.

Getting the idea? When you put it all together — high-speed 3G/4G/WiMax mobile devices with LBS, AR and real-time, personal news — we're talking about an entirely new computer experience.

I don't know where it's all going. All I know is that Google's smart-search-enabled mobile devices will change the way we see computing in ways unmatched since the Web changed everything in the early '90s.

Oh, yes, I also know that back then, Bill Gates didn't see the Internet as being all that important. It took about two years for Microsoft to realize that the Web had changed everything. If Microsoft and other companies don't follow Google quickly, they may not have two years to recover. We're in for some interesting times, my friends. ■

Steven J. Vaughan-Nichols *has been writing about technology and the business of technology since CP/M-80 was cutting-edge and 300bit/sec. was a fast Internet connection — and we liked it! He can be reached at sjvn@vnal.com.*

Career Watch

■ **Q&A**

Ron Hira

The Rochester Institute of Technology professor and author of **Outsourcing America** talks about the broad consequences of offshoring.

As a serious researcher of the outsourcing phenomenon, you have taken to warning that outsourcing has grave implications for the well-being of the nation. Could you elaborate? Standard economic theory tells us that offshoring could be good or it could be bad for the American economy and standard of living. It is ambiguous at the macro level, but there's good reason to believe that it will be bad. When a country outsources what it is good at, building up the capabilities of the country it trades with, it can be worse off. I think that's precisely what's going on right now with software and engineering offshoring. And companies are even offshoring innovation and R&D, something that would have been unthinkable even a few years ago. By doing so, America is undercutting its technological and economic future.

Standard theory also tells us that many American workers will be much worse off from offshoring, as their jobs move overseas and they face major wage competition from workers in low-cost countries. This isn't going to hit just a small segment of workers. Princeton economist Alan Blinder estimates that as many as 40 million jobs are newly offshorable, including nearly all science and engineering jobs. While not all of those jobs will be lost overseas, those workers will face wage pressures. We're already seeing it – Hewlett-Packard has asked many of its EDS employees to take 50% pay cuts.

There's no disputing this negative effect on American workers. Even the most pro-offshoring report, written by McKinsey Global Institute's Diana Farrell, which asserted that the U.S. will be better off with offshoring, concedes that American workers will experience major losses in wages and jobs.

Offshoring is a major structural shift in the way the economy works. Alan Blinder has called it a shift equivalent to the industrial revolution. Ponder that!

Of course, the well-being of the nation is not something that business leaders are expected to take into account. They answer to their shareholders. What needs to change so that companies reject outsourcing options that make economic sense for them? This is a very important observation, one that is lost on most politicians. When John Kerry was running for president, he called the CEOs who outsource "Benedict Arnolds." This was silly, because there's no point in trying to appeal to their patriotism. These are global companies, and the CEOs are not compensated by how many American workers they employ or even how the U.S. economy performs. They can and do lobby for public policies that benefit their companies, even if it is bad for the economy and America. They act rationally in their self-interest, and there's nothing wrong with that. The problem, though, is that there is no interest group representing the American national interest or American workers to counterbalance the business lobbyists. Think about it. Who is representing your readers in Washington?

The solution is for the government to approach this with both carrots and sticks. But the first step is for the government to take this issue seriously. Unfortunately, President Obama named Farrell, who is the leading offshoring evangelist, to the No. 2 post in his National Economic Council. Farrell has done more than anyone else to spread the gospel of offshoring, so it's hard to believe that Obama takes his own rhetoric about Buffalo vs. Bangalore seriously.

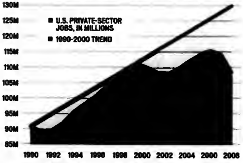
So, there's no movement toward changing the incentives through government action? Unfortunately, not yet. The Obama administration has been worse than disappointing on the issue of offshoring, practicing a bait-and-switch approach. By using the issue for political advantage, Obama has given a false sense to the public that he is taking action on offshoring. His only policy action to date is to *try* to close the tax loophole that encourages offshoring. It is highly unlikely he will have the political support to close the loophole, even though it should be a no-brainer.

No other country in the world gives tax breaks to companies that offshore work! Why do we do it? It's a prime example of the strength of the business lobby. And of course, the Obama administration has done nothing to close the loopholes in the H-1B and L-1 visa programs that spur offshoring.

– JAMIE ECKLE

U.S. PRIVATE-SECTOR JOBS ON THE DECLINE

If job creation had continued in this decade at the rate experienced in the 1990s, there would today be an additional 21 million private-sector jobs in the U.S. Much of that shortfall can be attributed to offshoring, says RIT professor Ron Hira.



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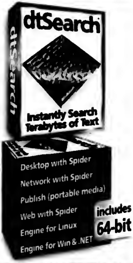

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TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Oops!

In the big open-plan office where this IT pilot fish works, the last employee to leave is supposed to turn out the lights. "One day, the last person in the office couldn't find the light switch but saw a big handle marked 'power,' so she decided to use that," fish says. "Well, it did turn the lights off." Next morning, everyone shows up for work, but no one can get in – the electric lock on the front door isn't working. Someone phones the manager who's responsible for the bypass keys, who tells the employees to smash the door in. But that idea doesn't sit well with fish's team, so they come up with an approach that involves ropes, ladders and gutters – but they manage to get into the office and restore power without causing any damage. "It certainly improved teamwork," says fish. "Later, we found out the only bypass key was in a locked cupboard inside the office. The key was moved to another office about a quarter-mile away in case we lost power again."

Virtually Useless

This pilot fish applies some updates to a pair of virtualized Windows 2003 servers, then finds one of them running fine the next morning – but the other one unresponsive. "It happened again a couple days after that," says fish. "Thinking the updates were the culprit, I uninstalled them, and all was fine for a week or so. Then it went unresponsive almost every morning." After two weeks of logging into the virtual console each day to turn the virtual machine off and on again, fish is ready to scrap it and re-create the server. But she finally spots a feature of the virtual console she hadn't found before: an event log. And according to the log, each morning that the virtual machine has been unresponsive, the machine has entered a sleep state – presumably to save power. "It was to hibernate after a period of inactivity," sighs fish. "We changed the setting back to 'never.' We're still not exactly sure how it switched to begin with."

What Could Be Better?

Pilot fish at this government lab is called in because some users just aren't following the rules. "I was asked to help investigate the root cause for a continuing failure," fish says. "Remotely located team members were not successfully complying with the requirements of what I personally found to be a rather contorted procedure. Interviews with headquarters staff indicated a conviction that all failures were due entirely to the negligence of the remote staff to simply adhere to a procedure of impeccable clarity. The basis for their overwhelming confidence in the quality of the procedure: 'Because we wrote it.' "

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OPINION

Paul Glen

IT Relief Will Lag Economic Recovery

WHETHER OR NOT an economic recovery has begun, I suspect that this will be another tough year for those of us in IT. Take a deep breath and get ready for it. I'm not trying to quash the small signs of budding optimism, but I can't help feeling that excessive confidence may threaten us personally and collectively. I think a bit of cautious realism is called for.

In my experience, IT budgets don't begin to rise until at least a year after an economic recovery begins in earnest. This seems to be due to both emotional and logistical issues. Logistically, budgeting changes take time. Typically, the larger the organization, the slower the budgeting wheels grind. *Nimble* is not a word that comes to mind when thinking about financial controls. But this is more than just a mechanical problem.

Emotionally, business leaders tend to have mood swings like everyone else. They become excessively optimistic and pessimistic, swinging wildly from one to the other. During the optimistic periods, they overspend on (excuse me, *invest in*) IT. During the pessimistic ones, they starve every operational area until it barely functions. It's easy to remind executives that one can't scrimp a business into profitability, but no one seems to pay much attention. When bonuses are based on quarterly numbers, the urge to cut expenses is tough to resist.

So, despite the fact that many companies are now reporting profits, it seems to me that we're in for at least another year of tough times.

For those who lost their jobs, it could be another slow year for trying to find work. For those just entering the workforce from school, it could be especially difficult, as risk-averse managers bring in only people with specific experience and expertise. Trying to figure out what training to get or skills to acquire will be hard. It's going to be difficult to stand out. Also, despite the fact that a lot of talented people have been unemployed for long periods of time, I expect that hiring will be biased toward those who are currently working. The unspoken, and often faulty, assumption is that people with jobs must be more talented than those without.

Despite the fact that many companies are now reporting profits, it seems to me that we're in for at least another year of tough times.

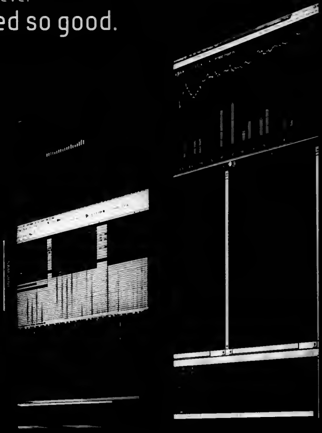
On the positive side for those without jobs, opportunities for contracting may become more plentiful. As employers start to work on more things, they will hit the limits of what their remaining staffers can do. Instead of hiring new employees, they are likely to look for contractors. Once an employer likes you as a contractor, it is more likely to hire you as an employee.

And even if you have a job, it could still be a tough year. As activity picks up, employers are likely to press for more work from existing staff. And they're likely to get it. No one wants to lose a job now. So expect some long hours and little reward besides keeping your job — and maybe a little appreciation. As you're suffering under the burden, just remember that one of the major things worse than having a job this year is not having one.

So, what can we, as individuals, do when we're in the grip of forces larger than ourselves? Surrender to them and focus on the things we can control. Look carefully at the systemic forces, understand them, and accept that you are largely powerless against them. Surf the waves. If you try to stand fast and resist or absorb the energy, you will only exhaust yourself. This is not the same as denial. Hiding from reality robs you of the opportunity to take advantage of what's happening around you.

I realize that all this advice is easy to give but hard to follow. Good luck, and happy new year. ■

Paul Glen *is a consultant who helps technical organizations improve productivity through leadership, and the author of the award-winning book* Leading Geeks *(Jossey-Bass, 2003). You can contact him at info@paulglen.com.*



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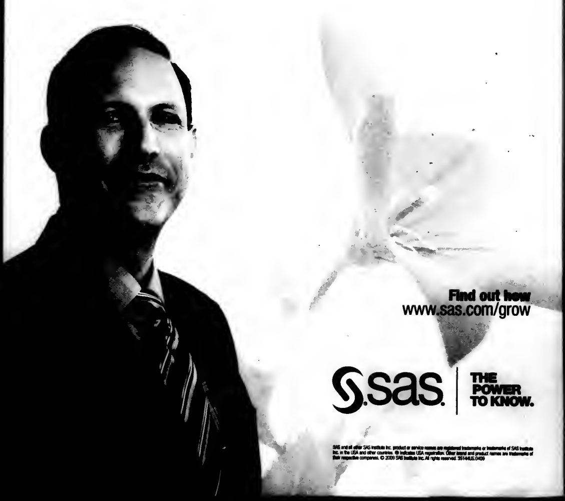

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